

CLAIMS

- 5 1. An interlayer for a laminated glass  
which comprises a thermoplastic resin sheet provided with  
embossments comprising concave portions and convex portions on  
both sides thereof,  
a pitch of embossments on one side being different from  
a pitch of embossments on the other side.
- 10 2. The interlayer for a laminated glass according to Claim  
1,  
wherein concave portions on at least one side are  
continual.
- 15 3. The interlayer for a laminated glass according to Claim  
1 or 2,  
wherein bottoms of concave portions on at least one side  
are continual.
- 20 4. The interlayer for a laminated glass according to any  
one of Claims 1 to 3,  
wherein the pitch (L1) of embossments on one side and the  
pitch (L2) of embossments on the other side satisfy the relation  
of  $(L1) < (L2)$ , and  
25 the proportion of existence of a convex portion on the  
other side within the range  $(L1 \times 0.25)$  of before and after a  
position of a convex portion on one side is not more than 50%  
of the number of convex portions on one side.
- 30 5. The interlayer for a laminated glass according to any  
one of Claims 1 to 4,  
wherein concave portions at least one side are provided  
in a linear pattern.
- 35 6. An interlayer for a laminated glass

which comprises a thermoplastic resin sheet provided with embossments comprising concave portions and convex portions on both sides thereof,

5 said concave portions on at least one side having a trough-like geometry with a continual bottom while said convex portion on the same side having a plateau-forming top surface.

7. The interlayer for a laminated glass according to Claim 6,

10 wherein fine concave and convex portions are provided on the plateau-forming top surface of the convex portion.

8. The interlayer for a laminated glass according to Claim 7,

15 wherein a surface roughness Ra of the plateau-forming top surface is not less than 2.5  $\mu\text{m}$ .

9. The interlayer for a laminated glass according to Claim 7 or 8,

20 wherein the surface roughness Ra of the plateau-forming top surface is not less than 3.0  $\mu\text{m}$ .

10. The interlayer for a laminated glass according to any one of Claims 6 to 9,

25 wherein a width of the plateau-forming top surface is not less than 20% of a pitch of convex portions.

11. The interlayer for a laminated glass according to any one of Claims 6 to 10,

30 wherein the width of the plateau-forming top surface is constant.

12. The interlayer for a laminated glass according to any one of Claims 6 to 11,

35 wherein the width of the plateau-forming top surface is

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random.

13. An interlayer for a laminated glass  
 which comprises a thermoplastic resin sheet provided with  
 5 embossments comprising concave portions and convex portions on  
 both sides thereof,  
 said concave portions on at least one side having a  
 trough-like geometry, and  
 segmenting walls being formed in said trough-like  
 10 geometry.

14. The interlayer for a laminated glass according to  
 Claim 13,  
 wherein a height of the segmenting wall is smaller than  
 15 a depth of the trough.

15. The interlayer for a laminated glass according to  
 Claim 12 or 14,  
 wherein segmenting walls are arranged at equal intervals.

16. An interlayer for a laminated glass  
 which comprises a thermoplastic resin sheet provided with  
 embossments comprising concave portions and convex portions on  
 both sides thereof,  
 25 said concave portions on at least one side having a  
 trough-like geometry and being not on one and the same level,  
 and  
 a ratio of a surface roughness (Rz) and a surface roughness  
 (Rzv) of a negative model being  $Rzv/Rz \geq 0.25$  on at least one  
 30 side.

17. The interlayer for a laminated glass according to  
 Claim 16,  
 wherein troughs are provided in a linear configuration.

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18. The interlayer for a laminated glass according to Claim 16

wherein troughs are provided in a grid configuration.

5 19. An interlayer for a laminated glass which comprises a thermoplastic resin sheet provided with embossments comprising concave portions and convex portions on both sides thereof,

10 said concave portions on at least one side having a continual trough-like geometry, and

said convex portion on the same side having segmenting troughs while a bottom of said segmenting trough being not on one and the same level as a bottom of the continual trough-like geometry of said concave portion.

15 20. The interlayer for a laminated glass according to Claim 19,

20 wherein the trough-like geometry of the concave portion and segmenting troughs of said convex portion are provided in a grid configuration.

21. The interlayer for a laminated glass according to Claim 19,

25 wherein the trough-like geometries of the concave portion and segmenting troughs of said convex portion are provided in a random configuration.

22. The interlayer for a laminated glass according to any one of Claims 19 to 21,

30 wherein a depth of segmenting troughs of the convex portion are uniform.

23. The interlayer for a laminated glass according to any one of Claims 19 to 21,

35 wherein a depth of segmenting troughs of the convex portion

are random.

24. An interlayer for a laminated glass  
which comprises a thermoplastic resin sheet provided with  
5 embossments comprising concave portions and convex portions on  
both sides thereof,  
at least one side being provided with concave troughs,  
and  
an angle between said concave trough and a direction of  
10 extrusion of said thermoplastic resin sheet being less than 25°.

25. An interlayer for a laminated glass  
which comprises a thermoplastic resin sheet provided with  
embossments comprising concave portions and convex portions on  
15 both sides thereof,  
said concave portions on at least one side having a  
trough-like geometry, and  
said trough-like geometry being constant in sectional area  
while having a depth distribution of troughs having a depth of  
20 not less than 5% of the maximum trough depth.

26. The interlayer for a laminated glass according to  
Claim 25,  
wherein troughs having the depth of not less than 5% of  
25 the maximum trough depth are provided at a pitch of not more  
than 10 mm.

27. The interlayer for a laminated glass according to  
Claim 25 or 26,  
30 wherein the trough-like geometry is provided in parallel  
with the direction of flow of the interlayer for a laminated  
glass.

28. The interlayer for a laminated glass according to  
35 any one of Claims 1 to 23 and 25 to 27,

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wherein the thermoplastic resin sheet is a plasticized polyvinyl acetal resin sheet.

29. A laminated glass
- 5 obtainable by interposing the interlayer for a laminated glass according to any one of Claims 1 to 23 and 25 to 28 between at least one pair of glass sheets and consolidating them into an integral unit.

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